

AMENDMENTS TO THE CLAIMS

1. (canceled)
2. (currently amended) A data storage device as in claim [1] 15, wherein the acoustic noise is generated by components within the housing.
3. (canceled)
4. (currently amended) A data storage device as in claim [3] 15, wherein the acoustic noise is in part generated external of the housing.
5. (currently amended) A data storage device as in claim [3] 15, wherein the noise reducing waveform is out of phase to the acoustic noise.
6. (original) A data storage device as in claim 5, wherein the noise reducing waveform is substantially 180° out of phase to the acoustic noise.
7. (currently amended) A data storage device as in claim [3] 15, wherein the waveform generating means comprises transducing means for detecting the acoustic noise, and the waveform generating means generates the noise reducing waveform based on the detected acoustic noise.
8. (original) A data storage device as in claim 7, wherein the noise reduction means comprises means to filter cyclical acoustic noise.
9. (currently amended) A data storage device as in claim [3] 15, wherein the waveform generating means comprises stored noise reducing waveforms.

10. (original) A data storage device as in claim 9, wherein the noise reducing waveforms are stored in at least one of RAM, PROM, ROM and the storage medium.

11. (currently amended) A data storage device as in claim [3] 15, wherein the waveform generating means comprises means for generating a noise reducing waveform based on 20 characteristic acoustic noise of moving components in the housing.

12. (original) A data storage device as in claim 11, wherein the waveform generating means generates the noise reducing waveform based on characteristic acoustic noise of at least one of the motor drive and actuator.

13. (original) A data storage device as in claim 12, wherein the waveform generating means further comprises stored waveforms, and the waveform generating means selects the noise reducing waveform from the stored waveforms based on characteristic acoustic noise of at least one of the motor drive and actuator.

14. (original) A data storage device as in claim 13, wherein the waveform generating means includes a waveform generator.

15. (currently amended) ~~A data storage device as in claim 3,~~ A data storage device comprising:

a housing;

a storage medium;

a motor drive for moving the storage medium within the housing;

a transducer for accessing the storage medium wherein said transducer produces a waveform within said housing;

an actuator for positioning the transducer with respect to the storage medium; and
noise reduction means comprising a waveform generating means for generating a noise
reducing waveform to counteract against the acoustic noise, wherein the noise reduction means
is integrated within the housing for actively reducing acoustic noise by broadcasting a noise
reducing waveform that is generated from said noise, wherein the noise reducing means further
comprises means for reading a servo signal from the storage medium using from the
transducer, wherein the waveform generating means generates a noise reducing waveform
based on said servo signal.

16. (original) A data storage device as in claim 15, wherein the servo signal is
correlated to vibrations of at least one of the storage medium and actuator.

17. (original) A data storage device as in claim 16, wherein the storage medium
includes data representing one or more cyclical noise waveforms that are representative of the
acoustic noise generated by the actuator and motor drive.

18. (original) A data storage device as in claim 17, wherein the noise reduction means
further comprises means for detecting drive signals applied to said one of the actuator and
motor drive, and the waveform generating means generates the noise reducing waveform based
on the detected drive signals.

19. (original) A data storage device as in claim 18, wherein the waveform generating
means retrieves corresponding, stored cyclical noise waveforms based on the drive signals.

20-22. (canceled)